"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP4017720 S/0294/63/001/003/0416/0424

AUTHORS: Petukhov, B. S.; Royzen, L. I.

TITLE: Experimental investigation of heat exchange in the case of turbulent flow of gas in tubes of annular cross section

SOURCE: Teplofizika vy*sokikh temperatur, v. 1, no. 3, 1963, 416-424

TOPIC TAGS: heat exchange, annular cross section tube, turbulent air flow, unilater heat supply, heat transfer coefficient, Reynolds number, heat flux density, thermal flow stabilization, hydrodynamic flow stabilization

ABSTRACT: In order to ascertain the effect of the geometry on heat exchange in tubes with annular cross sections, a topic far from fully explained in the literature, the authors consider a procedure and the results of an experimental investigation of heat exchange for turbulent flow of air in such tubes with a diameter ratio ranging

Card 1/4

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ACCESSION NR: AP4017720

from 0.07 to 0.7. The principal measurements were made with unilateral heat supply, i.e., with constant density of heat flow in one of the walls, the other wall being thermally insulated. The heat transfer coefficients were measured on the heated walls and the adiabatic wall temperatures on the insulated walls. The Reynolds number range was from $10^4$ to $3 \times 10^5$. The coefficients were calculated using relations derived in an earlier paper (Inzh.-fiz. zh. no. 3, 1963). To check on these relations, some of the experiments were carried out with both walls heated simultaneously. The data obtained make it possible to calculate the heat exchange for an arbitrary ratio of heat-flux densities on the inner and outer walls. The data can be used to calculate heat transfer in annular tubes in regions with thermal and hydrodynamic stabilization of the flow, for an arbitrary ratio of heat load on the walls. Orig. art. has: 7 figures, 6 formulas, and 3 tables.

Card 2/4

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP4017720

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

SUBMITTED: 06Oct63 DATE ACQ: 23Mar64 ENCL: 01

SUB CODE: PH NR REF SOV: 004 OTHER: 005

Card 3/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4



S/056/60/039/005/044/051
B006/B077

24.6600

AUTHORS: Podgoretskiy, M. I., Royzen, I. I.

TITLE: The Problem of Nuclear Emission in the Presence of Nonexcited Nuclei of the Same Type

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1473 - 1475

TEXT: If a gamma quantum is emitted by an excited nucleus in the presence of one or several nonexcited nuclei of the same type, a quantum may stray in such a system, and a change of the observed frequency and a damping of the emission may occur, as is reported in the present "Letter to the Editor". The theoretical investigation is based on the assumption that the nuclei can be considered to be isotropic classical oscillators. The emission field of a nucleus in a symmetric diatomic molecule is calculated, and the emission of an excited nucleus in a chain molecule (crystal) is investigated. For the special case of a cubic crystal, the amplitude of emission is expressed by a formula. The authors thank V. I. Ogiyevetskiy, V. M. Fayn, Ya. I. Khanin, D. S. Chernavskiy, and



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86927

The Problem of Nuclear Emission in the Presence of Nonexcited Nuclei of the Same Type

S/056/60/039/005/044/051
B006/B077

F. L. Shapiro for discussions. There are 3 references: 1 Soviet and 2 German.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: May 31, 1960

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP4019229 S/0056/64/046/002/0628/0636

AUTHOR: Royzen, I. I.; Chernavskiy, D. S.

TITLE: Intersection of vacuum pole trajectories

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 628-636

TOPIC TAGS: Regge pole, vacuum Regge pole trajectory, many particle state, t channel, pole trajectory crossing, moving pole method, proton proton scattering, pion proton scattering, asymptotic scattering amplitude

ABSTRACT: In view of the discrepancies between recent experimental data on pp and $\pi^-p$ scattering (K. J. Foley et al., Phys. Rev. Lett. v. 10, 376, 1963) and the theoretical predictions based on the method of moving poles (V. N. Gribov, ZhETF v. 42, 1260, 1962 and 41, 1962, 1951), the authors consider the possibility of crossing of several vacuum pole trajectories at the point $j = 1$ for $t = 0$, in connection with the problem of allowance for the contribution of many particle states in the t-channel. Crossing of two trajectories is examined in great detail. The analysis explains the cited experi-

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP 4019229

mental data on $\pi^-p$ and pp scattering and yields a definite relation between the total cross sections of the processes. A simple example wherein a non-decreasing asymptotic value is obtained for the elastic scattering cross section within the framework of the Regge method is presented. While the asympotote does not decrease, it is likewise not purely diffractional. If there are more than two conjugate poles, then the diffraction behavior is approached. The possible existence of crossing trajectories is discussed. "The authors are grateful to Ye.L. Feynberg for valuable advice and continuous interest in the work." Orig. art. has: 1 figure and 39 formulas.

ASSOCIATION: Fizicheskiy institut im. P.N.Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 05Jul63 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

CHERNAVSKIY, D. S., DREMIN, I. M. and ROYZEN, I. I.

"Interaction of High Energy Nucleons according to Diagram Method View Point and Double Dispersion Relations"

Report presented at the International Conference on Cosmic Rays and Earth Storm, 4-15 Sep 61, Kyoto, Japan.

P. N. Lebedev Physical Institute, Academy of Sciences of the USSR, U.S.S.R.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PODGORETSKIY, M.I.; ROYZEN, I.I.

Radiation of a nucleus in the presence of nonexcited nuclei of the same type. Zhur.eksp.i teor.fiz. 39 no.5:1473-1475 N '60. (MIRA 14:4)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Nuclei, Atomic) (Radiation)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.I.; CHERNAVSKIY, D.S.

Intersection of vacuum pole trajectories. Zhur. eksp. i teor. fiz. 46 no.2:628-636 F '64. (MIRA 17:9)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

S/056/62/042/002/047/055
B108/B138

AUTHORS: Royzen, I. I., Chernavskiy, D. S.

TITLE: Interference between the amplitudes of inelastic processes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 625 - 629

TEXT: The interference between the single-meson and two-meson amplitudes of high-energy inelastic nucleon collisions is studied. The imaginary part of the scattering amplitude may be represented as an expansion into amplitudes with a definite number of intermediate mesons

$$\mathrm{Im}\,\varphi_i^T(s,t=0) = \mathrm{Im}\left[\varphi_{i(2)}^T + \varphi_{i(3)}^T + \ldots + \varphi_{i(n)}^T\right].$$

T is the isotopic spin of the system. With the aid of the optical theorem it is shown that the single-meson and two-meson interference term is directly related to the three-meson amplitude of elastic scattering. It is further shown that, if elastic scattering has a diffraction character, there is no interference between single-meson and two-meson amplitudes. In such a case, interferences between even and odd-numbered meson amplitudes do not occur at all.

Card 1/2

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Interference between inelastic single and three-meson (generally $(2n+1)$-meson) amplitudes is possible but its contribution is only small. V. B. Beresteteskiy, I. Ya. Pomeranchuk, V. Ya. Faynberg, and Ye. L. Feynberg are thanked for discussions. There are 4 figures and 11 references: 6 Soviet and 5 non-Soviet. The references to English-language publications read as follows: F. Salzman, G. Salzman, Phys. Rev. Lett., 5, 377, 1960; P. Matthews, A. Salam, Preprint; M. L. Goldberger et al., Phys. Rev., 120, 1250, 1960.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: September 28, 1961



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I. S.

ROYZEN, I.S.; AYZENSHTAT, I.I., redaktor.

[Laboratory work in connection with safety engineering and fire prevention] Laboratornye raboty po tekhnike bezopasnosti i protivopozharnoi tekhnike. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1953. 123 p. (MLRA 7:8)
(Industrial accidents) (Fire prevention)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S.

Safety diaphragms for pressure vessels. Bezop. truda v prom. 2 no.8:18-20 Ag '58. (MIRA 12:7)

1.Zaveduyushchiy kafedroy tekhniki bezopasnosti Moskovskogo instituta khimicheskogo mashinostroyeniya.
(Pressure vessels--Safety measures)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I S.

GRIGORYAN, Grigoriy Markovich, doktor tekhnicheskikh nauk; ALEKSIN, Aleksandr Georgiyevich, inzhener; ZAKS, Saveliy L'vovich, kandidat tekhnicheskikh nauk; KUZIN, Mikhail Ivanovich, inzhener; POLOZKOV, Vladimir Tikhonovich, kandidat tekhnicheskikh nauk; SUKHANOV, Vasiliy Pavlovich, inzhener; SULTANOV, D.K., inzhener; STREL'CHUK, Nikolay Antonovich, inzhener; CHERNYAK, Il'ya L'vovich, inzhener; KUSHELEV, V.P., retsenzent; ROYZEN, I.S., otvetstvennyy redaktor; ZAMARAYEVA, K.M., vedushchiy redaktor; KOVALEVA, A.A., vedushchiy redaktor; SAVINA, Z.A., vedushchiy redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor

[Safety engineering and fire prevention in the petroleum industry] Tekhnika bezopasnosti i protivopozharnaia tekhnika v neftianoi promyshlennosti. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gornotoplivnoi lit-ry, 1956. 508 p. (MLRA 10:1)
(Petroleum industry--Safety measures)
(Fire prevention)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

Royzen, I.S.

Sponsoring Agencies: [illegible] Glavnoye upravleniya po ispol'zovaniyu atomnoy energii, and Akademiya nauk SSSR.

Editorial Board of Sci: V.I. Dikunin, Academician (Resp. Ed.), N.M. Shumilovskiy (Deputy Resp. Ed.), Yu. S. Zaslavskiy (Deputy Resp. Ed.), L.F. Tikochenko, B.I. Vorkhovskiy, S.T. Kazarov, L.I. Petrenko, and N.G. Zelvinskaya (Secretary).

Ed. of Publishing House: P.N. Belyanin; Tech. Ed.: T.P. Polenova.

PURPOSE: This book is intended for specialists in the field of machine and instrument manufacture who use radioactive isotopes in the study of materials and processes.

COVERAGE: This collection of papers covers a very wide field of the utilization of tracer methods in industrial research and control techniques. The topic of this volume is the use of radioisotopes in the machine- and instrument-manufacturing industry. The individual papers discuss the applications of radioisotope techniques in the study of metals and alloys, problems of friction and lubrication, metal cutting, engine performance, and defects in metals. Several papers are devoted to the use of radioisotopes in the automation of industrial processes, recording and measuring devices, quality control, flowmeters, level gauges, safety devices, radiation counters, etc. These papers represent contributions of various Soviet institutes and laboratories. They were published as transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, April 4-12, 1957. No personalities are mentioned. No references are given at the end of most of the papers.


Vedernikov, A.N. (Kazanskiy aviatsionnyy institut – Kazan'Aviation Institute). Certain Problems in the Preparation of Beta Emitters for the Elimination of Electrostatic Charges 292

Medvedeva, V.S. and I.S. Royzen (Moskovskiy institut khimicheskogo mashinostroyeniya – Moscow Institute for Chemical Machinery). Use of Radioactive Isotopes in Safety Practice 293

Royzen, I.S. (Moskovskiy institut khimicheskogo mashinostroyeniya – Moscow Institute for Chemical Machinery). Production of Plates for Charge Neutralization 298

Abramova, T.V. (Ministerstvo svyazi SSSR – USSR Ministry of Communications). Determination of Leaks in the Lead Sheath of Communication Cables 299

Kuznetsov, V.I. (Institut khimicheskoy fiziki Akademii nauk SSSR – Institute of Physical Chemistry, Academy of Sciences, USSR). Determination of Points of Gas Leakage From Underground Pipelines 301

Tatochenko, L.K. (Institut metallovedeniya i fiziki metallov TsNIITsM – Institute of Metallography and the Physics of Metals TsNIITsM). Ionization Method of Gamma Defectoscopy 304

Pakidov, I.G., A.A. Samokhvalov, N.I. Davidenko, and M.D. Mikhaylenko (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii – Central Scientific Research Institute of Ferrous Metallurgy). Use of Scintillation Counters in Betatron Defectoscopy 310

Arkhangel'skiy, A.A., and G.D. Dezyakev (Leningradskiy institut inzhenerov zheleznodorozhnogo transporta – Leningrad Railroad Engineers Institute). Use of Scintillation Counters in the Production Quality Control 314

Tatochenko, L.K., V.S. Tolmakov, and V.K. Latyshev (Institut metallovedeniya i fiziki metallov TsNIITsM – Institute of Metallography and the Physics of Metals TsNIITsM). Radioscopic Control of Welded Seams in Ferrous Metallurgy 320

Nazarov, S.T. (Moskovskoye vysshoye tekhnicheskoye uchilishche imeni N.E.Baumana – Moscow Higher Technical School imeni N.E. Baumann). Radiography of Welded Pipe Joints 324


APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

KUZ'M, I. S.

Laboratornyye raboty po tekhnike bezopasnosti i protivopozharnoy tekhnike (Laboratory work in connection with safety engineering and fire prevention) Moskva, Goskhimizdat, 1963.

123 p. illus., diagrs., tables.

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S.; POZAMANTIR, A.G.; MEDVEDEVA, V.S.; BYTENSKIY, V.Ya.; STEPANOVA, N.A.; SAPOZHKOVA, R.A.

Investigating the danger of the explosion of acetylating mixtures. Bezop. truda v prom. 8 no.10:45-47 O '64. (MIRA 17:11)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S.

Modern methods for the prevention of explosions in automated chemical plants. Zhur. VKHO 7 no.6:602-618 '62. (MIRA 15:12)
(Chemical industries--Safety measures)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S.; KANER, B.L.

Principles for the normalization of protection from static electricity in the chemical industry. Zhur. VKHO 7 no.6:626-632 '62. (MIRA 15:12)

(Chemical industries--Safety measures)
(Electrostatics)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROZLOVSKIY, A.I.; ROYZEN, I.S.; MEDVEDEVA, V.S.

Limits of the ignition of ethylene and oxygen mixtures with carbon dioxide additives. Khim. prom. 41 no.10:754-756 O '65. (MIRA 18:11)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

S/191/61/000/012/006/007
B110/B147

AUTHORS: Royzen, I. S., Gutarev, V. V., Mal'tseva, A. S.

TITLE: Examination of burning characteristics of plastics

PERIODICAL: Plasticheskiye massy, no. 12, 1961, 32 - 36

TEXT: Between the classes of inflammable and poorly inflammable plastics established according to standards H-102-54 (N-102-54), "conditionally non-inflammable, self-extinguishing" plastics should be ranged as an intermediate stage. The Tsentral'nyy nauchno-issledovatel'skiy institut pozharnoy okhrany (Central Scientific Research Institute of Fire Protection) has recommended the following methods: (a) method with "fire tube"; (b) calorimetric method; and (c) method of the velocity of flame propagation. The TsNIIPO recommends determining loss in weight and capability of glowing and burning in open flame by (a). At > 20% loss in weight, the plastics are inflammable; at a loss in weight < 20% and self-extinction, (b) is applied. In this case, it holds: $K = q_{hr}/q_s$, where $q_{hr}$ = amount of heat released in combustion of the sample;

Card 1/4

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$q_s$ = amount of heat supplied from the heat source. At K = 0, the material is not inflammable, at K > 0.5 poorly inflammable, at K < 2.1 inflammable. Besides, a poorly inflammable class was suggested between K = 0.5 - 2.1. Comparison between Western and Soviet methods showed that the loss in weight is the most convenient index of inflammability of > 1 mm thick solid plastics. At < 1 mm thick films, the length of the burnt section and the rate of burning can be most reliably determined. Therefore, the authors suggest to determine the inflammability (A) of 1 - 10 mm thick solid and powder plastics, and (B) of flexible < 1 mm thick films. In this case, the investigation conditions of the fire tube of the TsNIIPO were established by using an alcohol burner with an alcohol of definite quality and concentration. A 200-v nichrome heating coil is wound on a tube made of quartz or molybdenum glass (Fig. 6) 50 mm above the lower edge. Six samples (35·150, thickness 1 - 10 mm) weighed with an accuracy of 0.5 g, are suspended in exactly vertical position. The sample ends project below by 5 mm, and they are inflamed 10 mm above the burner within 2 min by a 40 mm high flame. The surface temperature is kept at 20 - 30°C below the melting temperature of the sample. Loose material is filled into a small Cu wire basket. The following classes of plastics are



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4



established: (a) inflammable with > 20% loss in weight; (b) poorly inflammable with < 20% loss in weight and < 30 sec afterglow; (c) "conditionally non-inflammable and self-extinguishing" with < 8% loss in weight, extinguishing at once; (d) non-inflammable, not burning on double ignition. The mean loss in weight in the fire tube for viniplast is 7.7%, in the heated fire tube 6%, for glass plastics 2.5% and 5.5%. When inflaming 150·112·3 mm samples of pine, viniplast and glass plastics impregnated with gasoline for 3 hr, viniplast and glass plastics did not burn. As a modification of the British standard 476, a 40·550 sample (< 1 mm thick) is heated on needles placed on a hemispherical frame (1, Fig. 7). Ignition is caused by an alcohol burner with 40-mm high flame. In this case, the following classes are established: (a) poorly inflammable at 30 sec afterglow and 50 mm length of the burnt section; (b) conditionally non-inflammable, self-extinguishing, with extinction occurring immediately after removing the flame; (c) non-inflammable, after double ignition. Advantages of the method: (1) Burning conditions variable with time; (2) estimation of burning rate according to the length of the burnt section; and (3) simple handling. Since most of the plastics are inflammable, halogen derivatives of hydrocarbons must be



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4



used for producing non-inflammable, self-extinguishing plastics. There are 7 figures and 3 tables.

Fig. 6. Diagram of an apparatus for determining the degree of inflammability of solid and powder plastics.
Legend: (1) tube; (2) heater; (3) thermocouple.

Fig. 7. Diagram of an apparatus for determining the inflammability of films.
Legend: (1) hemispherical frame; (2) needles.

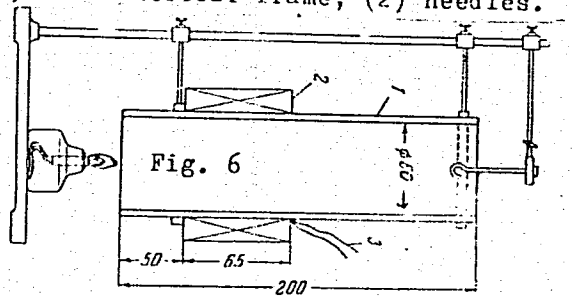


Fig. 6

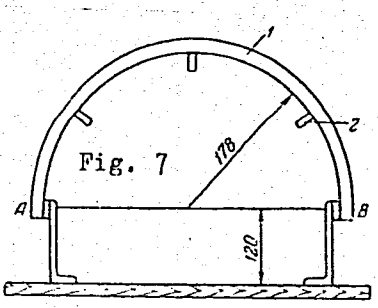


Fig. 7

Card 4/4

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

S/032/62/028/004/011/026
B101/B138

AUTHORS: Royzen, I. S., Cutarev, V. V., and Mal'tseva, A. S.

TITLE: Determination of inflammability of plastics

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 4, 1962, 467-468

TEXT: No standard method of determining inflammability has been promulgated in the USSR. The Tsentral'nyy nauchno-issledovatel'skiy institut pozharnoy okhrany (Central Scientific Research Institute of Fire Protection) recommends the fire tube and calorimetric methods, or measurement of the rate of flame propagation. The inflammability of rigid and free-flowing plastics was tested by the fire tube method. The apparatus consisted of a 2 mm-thick quartz or molybdenum glass tube heated by a nichrome coil attached to it 50 mm from the bottom end. The temperature of the outer wall was measured at height h = 2/3 l. The temperature was kept 20 - 30°C below the melting point of the plastic. A piece of the plastic of precise weight was suspended inside the tube (free-flowing material was held in a copper mesh basket) so that 5 mm of it projected beyond the tube. An alcohol burner, flame

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4



length 40 mm, was placed 10 mm below and burned for 2 min. Dependent on the behavior after removal of the flame, the following material classification is suggested: inflammable, if burning continues and weight loss is more than 20%; slow-burning, if burning or glowing continues for not more than 30 sec with less than 20% loss in weight; conditionally flame resistant and self-extinguishing if the flame dies at once and the weight loss is less than 8%; noninflammable, if it does not catch alight in two tests. Inflammability of sheets and films was determined on an apparatus similar to that recommended by British Standard no. 476. A 40 mm alcohol flame was applied for 30 sec. The length of the piece burned and burning time after removal of the flame were determined. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Chemical Machinery)



APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S., prof.

Safety measures in producing acetylene of natural gas. Bezop.truda v prom. 5 no.12:18-19 D '61. (MIRA 15:1)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
(Acetylene) (Gas, Natural) (Cracking process--Safety measures)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, I.S.; GUTAREV, V.V.; MAL'TSEVA, A.S.

Investigating ignitable characteristics of plastics.
Plast.massy no.12:32-36 '61. (MIRA 14:12)
(Plastics—Testing)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

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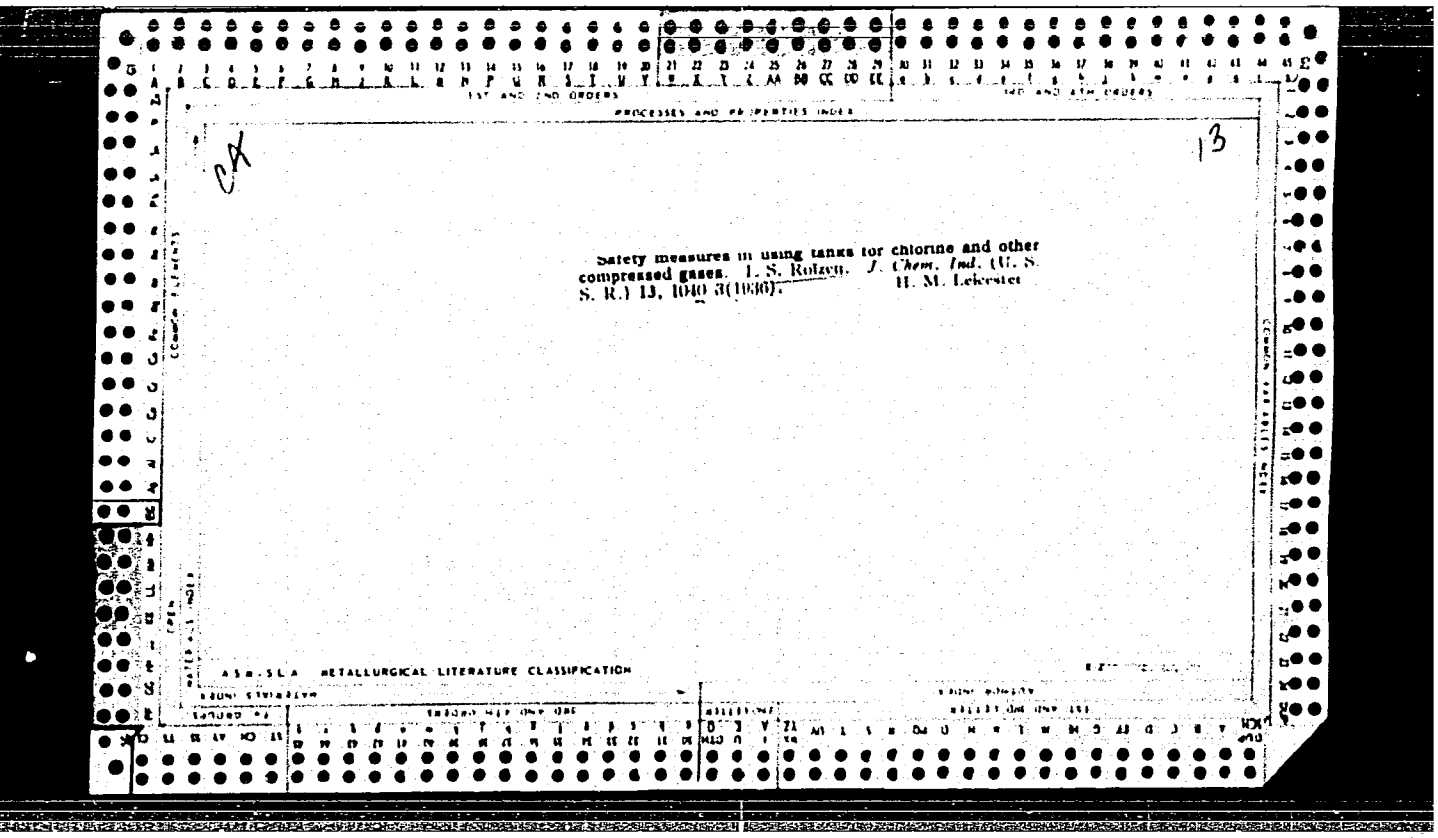

Safety measures in using tanks for chlorine and other compressed gases. L. S. Rolzen. *J. Chem. Ind.* (U. S. S. R.) 13, 1040 3(1936). H. M. Lekeseter

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

L 47304-66 EWT(1)/EWP(m) WW
ACC NR: AP6030330 SOURCE CODE: UR/0170/66/011/002/0148/0153

AUTHOR: Royzen, L. I.; Dul'kin, I. N.; Rakushina, N. I.

ORG: Electrotechnical Institute im. V. I. Lenin, Moscow (Elektrotekhnicheskiy institut)

TITLE: Heat exchange in a streamline flow of straight traverse fins

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 11, no. 2, 1966, 148-153

TOPIC TAGS: heat exchange, traverse fin, Reynolds number, streamline flow

ABSTRACT: An experimental investigation of heat exchange has been carried out on a large-scale model of a channel with transverse fins in a gas flow. Distributions of local heat-exchange coefficients over the top of the fin are obtained as a function of geometric characteristics and the Reynolds number. The data obtained are used for calculating the correction factors to the efficiency in consideration of the nonuniformity of distribution of $\alpha$ over the height of the fin. An equation is presented for the mean heat exchange. The experimental data are compared with the

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L 47304-66
ACC NR: AP6030330 0

values available. Orig. art. has: 3 figures and 15 formulas. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 17Feb66/ ORIG REF: 003/ OTH REF: 004/

Card 2/2 afs

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETUKHOV, B. S.; ROYZEN, L. I.

"Heat transfer for gas flow in annular tubes."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Moscow Power Inst.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, L.I., inzh.

Determining the optimum coefficient of finning of heat exchange surfaces. Khim.mashinostr. no.6:23-24 N-D '63. (MIRA 17:2)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETUKHOV, B.S.; ROYZEN, L.I.

Generalized relations for heat transfer during turbulent gas flow in circular tubes. Teplofiz. vys. temp. 2 no.1:78-81 Ja-F '64. (MIRA 17:3)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP4024193 S/0294/64/000/001/0078/0081

AUTHORS: Petukhov, B. S.; Royzen, L. I.

TITLE: Generalized equations for heat transfer in turbulent gas flow in tubes with annular cross section

SOURCE: Teplofizika vy*sokikh temperatur, no. 1, 1964, 78-81

TOPIC TAGS: heat transfer, turbulent gas flow, annular cross section tube, Nusselt number, Reynolds number, heat transfer coefficient, adiabatic temperature, unilateral heating

ABSTRACT: This is a continuation of an earlier investigation (Teplofizika vy*sokikh temperatur v. 1, no. 3, 1963). The most reliable experimental data obtained in this investigation (the reliability being ascertained by comparison with other data) are used to derive equations for the heat-transfer coefficients and the adiabatic temperatures of the walls of the annular tubes. The empirical

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ACCESSION NR: AP4024193

formulas derived are:

$$Nu_{тр,\infty} = 0{,}0180\,Re^{0.8}, \qquad (1)$$

$$\frac{Nu_{1н\infty}}{Nu_{тр\infty}} = 0{,}86(d_1/d_2)^{-0{,}16}\zeta, \qquad (2)$$

$$\frac{Nu_{2н\infty}}{Nu_{тр\infty}} = 1 - 0{,}14(d_1/d_2)^{0.6}, \qquad (3)$$

where Nu -- Nusselt number, Re -- Reynolds number, the subscripts 1 and 2 pertain to the inside and outside tube diameters, the subscripts 1H and 2H denote that $Nu_\infty$ pertains to the inside wall with the outside wall insulated and vice versa, and the subscript $\infty$ pertains to a round tube without an insert. $\zeta$ is a correction which takes into account the fact that the exponent of Re may be smaller than 0.8, and has a value

Card 2/4

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ACCESSION NR: AP4024193

$$\zeta = 1 + 7{,}5\left(\frac{d_2/d_1 - 5}{\mathrm{Re}}\right)^{0{,}6} \text{ for } d_1/d_2 < 0{,}2;$$
$$\zeta = 1 \text{ for } d_1/d_2 > 0{,}2,$$

The empirical formulas for the limiting adiabatic wall temperatures $\theta_{1\infty}$ and $\theta_{2\infty}$ are

$$\theta_{1\infty} = 32{,}0[0{,}16(d_1/d_2)^2 - 1]\,\mathrm{Re}^{-0{,}88}, \quad (4)$$
$$\theta_{2\infty} = \theta_{1\infty} \cdot d_1/d_2 \quad (5)$$

This set of equations makes it possible to calculate the heat transfer and the adiabatic temperatures of the walls for unilateral heating (internal or external). It is claimed that, compared with the presently derived formulas, the published data yield values that range from 50% to 300 or 400% of the true ones. Orig. art. has: 3 figures and 5 formulas.

Card 3/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACCESSION NR: AP4024193

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

SUBMITTED: 10Dec63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 004 OTHER: 005

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETUKHOV, B.S.; ROYZEN, L.I.

Experimental study of heat transfer during turbulent gas flow in circular tubes. Teplofiz. vys. temp. 1 no.3:416-424 N-D '63. (MIRA 17:3)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETUKHOV, B.S.; ROYZEN, L.I.

Heat transfer in tubes of annular cross section. Inzh.-fiz. zhur. 6 no.3:3-11 Mr '63. (MIRA 16:4)

1. Energeticheskiy institut, Moskva.
(Heat—Transmission)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETROVSKIY, Yu.V.; FASTOVSKIY, V.G.; ROYZEN, L.I.

Heat transfer and hydraulic resistance during the lengthwise flow of gas around transverse fin tubes. Khim.prom. no.6:433-438 Je '62. (MIRA 15:11)
(Pipe--Hydrodynamics) (Heat--Transmission)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

45411
S/170/63/006/003/001/014
B104/B186

AUTHORS: Petukhov, B. S., Royzen, L. I.

TITLE: Heat transfer in tubes with annular cross section

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 3, 1963, 3 - 11

TEXT: In this study the following assumptions are made: there is stationary flow of an incompressible liquid through a tube with annular cross section; the heat flow densities $q_{c_1}$ and $q_{c_2}$ to the inner and to the outer tube wall are constant; the heat transfer along the tube axis by heat conduction is small compared with the convective heat transfer; the physical properties of the liquid are independent of temperature; energy dissipation is negligible. Applying the condition of a stabilized temperature field yields the equation

$$CW_x R = \frac{\partial}{\partial R}\left[R\left(1+\frac{\varepsilon_q}{a}\right)\frac{\partial t}{\partial R}\right],$$

$$C = \frac{2(q_{c_1} r_1 + q_{c_2} r_2) r_2^2}{\lambda (r_2^2 - r_1^2)}. \qquad (6)$$

Card 1/3

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Heat transfer in tubes with ...

which is solved for the boundary conditions

$$\left(R\frac{\partial t}{\partial R}\right)_{R=R_1}=-\frac{q_{c_1}r_1}{\lambda},\quad \left(R\frac{\partial t}{\partial R}\right)_{R=1}=\frac{q_{c_2}r_2}{\lambda},\quad (\varepsilon_q)_{R=R_1,1}=0. \qquad (A).$$

Here, $W_x$ is the reduced velocity of the liquid, $R = r/r_2$, $R_1 = r_1/r_2$, r is the running parameter. Integrating (6) from $R_1$ to R and introducing the reduced temperature $\Theta = \frac{(t - t_{c_1})\lambda}{q_{c_1}r_1 + q_{c_2}r_2}$, yields

$$\Theta=\frac{2}{(1-R_1^2)}\int_{R_1}^{R}\frac{\int_{R_1}^{R}W_x R\,dR}{\left(1+\beta\frac{\varepsilon_\tau}{\nu}\mathrm{Pr}\right)R}dR-P\int_{R_1}^{R}\frac{dR}{\left(1+\beta\frac{\varepsilon_\tau}{\nu}\mathrm{Pr}\right)R}, \qquad (8),$$

where $\varepsilon_q/a$ is replaced by $\beta\varepsilon_\tau \mathrm{Pr}/\nu$; $\beta = \varepsilon_q/\varepsilon_\tau$, $P = q_{c_1}r_1/(q_{c_1}r_1 + q_{c_2}r_2)$.

Card 2/3

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Here $\varepsilon_q$ is the factor of turbulent heat transfer, and $\varepsilon_c$ the factor of turbulent momentum transfer. From these equations integral relations for the temperature field and for the heat transfer coefficients are derived for arbitrary heat loads on the walls. Finally the heat transfer of a laminar flow in annular tubes is calculated numerically. There are 4 figures and 1 table.

ASSOCIATION: Energeticheskiy institut, g. Moskva (Power Engineering Institute, Moscow)

SUBMITTED: October 2, 1962



APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

PETROVSKIY, Yu.V.; FASTOVSKIY, V.G.; ROYZEN, L.I.

Use of finned tubes in spiral cross-flow heat exchangers.
Khim. prom. no.9:58-63 S '61. (MIRA 15:1)
(Heat exchangers)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

31877
S/170/62/005/001/005/013
B104/B102

26.5200

AUTHOR: Royzen, L. I.

TITLE: Heat exchange in an annular channel at turbulent flow

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 1, 1962, 42-51

TEXT: A generalization of Lyon's well-known formula

$$\frac{1}{\mathrm{Nu}} = \frac{1}{2\,\mathrm{Pr}(b^2-1)^2(b-1)} \int_1^b \frac{(b^2-R^2)^2}{\left(\frac{1}{\mathrm{Pr}}+\frac{\varepsilon_T}{\nu}\right)R}\,dR. \qquad (26)$$

is derived on the basis of experimental data of R. R. Rothfus, C. C. Monrad and V. E. Senecal (Industrial and Engineering Chemistry, 42, no. 12, 1950) and of the boundary layer model for three layers of Karman. The values of this integral for each of the three layers have been investigated. Summing up the expressions obtained from (26) for these three layers one obtains

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Card 1/4

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Heat exchange in an annular...

$$\frac{Nu}{Pr\,Re_э} = \frac{1}{5}\sqrt{\frac{f_э}{2}}\left[\frac{Pr}{\beta} + \frac{\ln(1+5Pr)}{\beta} + \right.$$
$$\left. + \frac{1}{2\beta}\ln\left(\frac{\sqrt{b}-1}{b-1}\,\beta\,\frac{Re_э}{60}\sqrt{\frac{f_э}{2}}\right) + \psi(b)\right]^{-1}, \qquad (34)$$

where

$$\psi(b) = \frac{1}{2\beta}\,\frac{(b^2-\varphi^2)^2}{(b^2-1)^2\varphi}\ln\frac{\varphi-\sqrt{b}}{\varphi-1} -$$
$$-\frac{b^4}{2\beta}\,\frac{(\varphi-1)}{(b^2-1)^2\varphi}\ln\sqrt{b} - \frac{(\varphi-1)}{2\beta(b^2-1)^2}\left[\frac{(1+\varphi+\sqrt{b})^2-(\varphi+2)^2}{2}\right] +$$
$$+\frac{(\varphi-1)\beta}{2(b^2-1)^2}\left\{\frac{(b+\gamma)(b^2-\gamma^2)}{\gamma}\ln\frac{b-\gamma}{\sqrt{b}-\gamma} - \right.$$
$$\left. -\frac{b^3}{\gamma}\ln\sqrt{b} - \left[\frac{(\gamma+2b)^2-(\gamma+b+\sqrt{b})^2}{2}\right]\right\}. \qquad (35)$$

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Card 2/4

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These equations are discussed for special cases, and the results are compared with experimental data. For Pr = 0.5-1, (34) will yield lower Nusselt numbers than those from well-known empirical formulas. The formula of Mizushina et al. (Proceedings of the General Discussion on Heat Transfer, Institution of Mechanical Engineers, London and American Society of Mechanical Engineers, pp. 191-192, New York, 1951) furnishes higher values. From Pr = 5 onward the Nusselt numbers obtained from Eq. (34) agree with those obtained by the formula of Mizushina. For a turbulent air flow, (34) yields values which agree well with experimental data. In the equations given, the following notations are used: the continuous, inner, and outer tube diameter are denoted by r, $r_1$, and $r_2$, respectively: $d_э = 2(r_2-r_1)$, $R = r/r_1$, $b = r_2/r_1$; $\varepsilon_\tau$ is the momentum exchange coefficient, $\nu$ the kinematic viscosity, $f_2$ the coefficient of friction at the tube wall, $Re_э = 2u_{mean}(r_2-r_1)/\nu$ stands for the equivalent Reynolds number, $\varphi = b - (\varphi-1)\beta$,

$$\beta = \frac{(r_m^2 - r_1^2)/r_1}{(r_2^2 - r_m^2)/r_2} .$$

Card 3/4

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Heat exchange in an annular...

Ye. K. Averin et al. (Teplootdacha i teplovoye modelirovaniye, - Heat transfer and thermal simulation - Izd. AN SSSR, M., 1958) is mentioned. There are 3 figures, 1 table, and 9 references: 2 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: Monrad C. C., and Pelton J. F., Am. Inst. Chem. Engrs. Boston meeting, May, 1942; Davis E. S., Trans. ASME, 65, 755-759, 1943; Wiegand J. H., Trans. Am. Inst. Chem. Engrs., 41, 147-153, 1945; Foust A. S., and Christian G. A., Trans. Am. Inst. Chem. Engrs., 36, 541-554, 1940.

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. V. I. Lenina, g. Moskva (All-Union Electrotechnical Institute imeni V. I. Lenin, Moscow)

SUBMITTED: February 1, 1961

Card 4/4

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

L 11857-66 EWT(1)/EWP(m)/ETC(F)/EPF(n)-2/EWG(m)/EWA(d)/FCS(k)/EWA(1) WW/GS

ACC NR: AT6001354 SOURCE CODE: UR/0000/65/000/000/0066/0075

AUTHOR: Petukhov, B. S.; Royzen, L. I.

ORG: Moscow Power Institute (Moskovskiy energeticheskiy institut); All-Union Electrotechnical Institute im. V. I. Lenin (Vsesoyuznyy elektrotekhnicheskiy institut)

TITLE: Heat transfer in the flow of a gas in tubes with an annular cross section

SOURCE: Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v odnorodnoy srede (Heat and mass transfer. v. 1: Convective heat exchange in an homogeneous medium). Minsk, Nauka i tekhnika, 1965, 66-75

TOPIC TAGS: convective heat transfer, gas flow, thermodynamics

ABSTRACT: The article gives the results of an experimental investigation of heat transfer in the turbulent flow of air in annular tubes over a range of variation of the geometric parameter $d_1/d_2$ from 0.07 to 0.84. The experimental apparatus (shown in a diagram) consists of two concentric tubes. A table gives the geometric characteristics of the channels. The outer brass tube (wall thickness 0.003 meters ) was heated with an electric heater. The inner tube, made of 1Kh18N9T, was suspended at a single point by a wire with a thickness of 0.001 meters. The air was

Card 1/2

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ACC NR: AT6001354

fed into the channel from a high-pressure blower. All measurements were made at an estsblished steady thermal state of the system. The temperature of the walls and the temperature drop between the walls and the liquid were maintained approximately constant during the course of the experiments. Based on the experimental results, calculations were made of the density of the heat flux due to convection at the outer and inner wall of the tube. Equations are derived for calculation of the heat transfer and the adiabatic temperatures of the walls with unilateral heating (either inside or outside). Orig. art. has: 12 formulas, 5 figures, and 1 table.

SUB CODE: 20/ SUBM DATE: 31Aug65/ ORIG REF: 005/ OTH REF: 008

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Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, L.I.

Heat transfer in an annular channel under conditions of turbulent flow. Inzh.-fiz.zhur. 5 no.1:42-51 Ja '62. (MIRA 15:3)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni Lenina, Moskva. (Heat--Transmission) (Hydrodynamics)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, L.I.; GANNUS, V.K.

Automatic equipment for supplying liquid nitrogen to vessels.
Prib. i tekh. eksp. 6 no.2:191-192 Mr-Ap '61. (MIRA 14:9)

1. Vsesoyuznyy elektrotekhnicheskiy institut.
(Gases--Liquifaction) (Nitrogen)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S., kand.tekhn.nauk; STEFANOVICH, T.Kh., kand.tekhn.nauk

Magnetic amplifier blocks and their applications in electric drives and automatic control systems. Elektrotekhnika 36 no.11:28-32 N '65. (MIRA 18:11)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, Semen Semenovich; SHTEYN, Isaak Maksimovich; KIBLITSKIY, Vladimir Abramovich; KHECHUMYAN, A.P., red.; LARIONOV, G.Ye., tekhn. red.

[Automatic control and precise angular velocity measurement of the electric drives of continuous rolling mills] Avtomaticheskoe regulirovanie i tochnoe izmerenie skorosti elektrodvigatelei nepreryvnykh prokatnykh stanov. Moskva, Gosenergoizdat, 1962. 103 p. (Biblioteka po avtomatike, no.69) (MIRA 16:8)

(Rolling mills--Electric driving)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, Sh.S.

Our experience with pneumography in tumors of the temporal lobes of the brain. Vop.diag.i patomorf.nerv.zab. no.2:19-23 '59.
(MIRA 15:8)

(BRAIN--TUMORS) (BRAIN--RADIOGRAPHY)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, Sh.S.

Diagnosis of otogenic abscesses of the pons Varolii. Vop.diag.i patomorf.nerv.zab. no.2:135-138 '59. (MIRA 15:8)
(EAR--DISEASES) (PONS VAROLII--ABSCESS)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S., kand. tekhn. nauk (Moskva); RATNIKOV, A.S., inzh. (Moskva)

Large magnetic amplifiers with 400 c.p.s. rating for operation with the electric drives of rolling mills. Elektrichestvo no.6:71-75 Je '63. (MIRA 16:7)

(Rolling mills--Electric driving)
(Magnetic amplifiers)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S., kand.tekhn.nauk; SHTEYN, I.M., inzh.

Automatic control of the electric drive of a continuous reduction pipe-rolling mill. Elektrichestvo no.1:82-85 Ja '61. (MIRA 14:4)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt.
(Automatic control)
(Pipe mills--Electric driving)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S., kand.tekhn.nauk

Grid control of mercury-arc rectifiers by means of half-wave magnetic amplifiers. Elektrichestvo no.5:39-45 My '60. (MIRA 13:9)

1. Gosudarstvennyy proyektnyy institut "Tyazhpromelektroproyekt". (Magnetic amplifiers) (Mercury-arc rectifiers)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

POYEMNYY, F.A., prof.; ROYZEN, Sh.S., kand. med. nauk; SEMENOVA, Ye.P., red.; ZAK, A.L., tekhn. red.

[Vitamin $B_{12}$ in neurological practice] Vitamin $B_{12}$ v nevrologicheskoi praktike. [n.p.] M-vo zdravookhraneniia RSFSR, 1961. 127 p. (MIRA 14:9)

(CYANOCOBALAMINE) (NERVOUS SYSTEM—DISEASES)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

V

USSR/Pharmacology - Toxicology - Chelating Agents.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18643

Author : Royzen, Sh.S., Poyemnyy, F.A.

Inst : Gorkiy Medical Institute

Title : The Treatment of Nervous Diseases with Relatively Large and Massive Doses of Vitamin $B_{12}$

Orig Pub : Tr. Kliniki nervn. bolezney. Gor'kovskiy med. in-t, 1958, vyp. 1, 10-15

Abstract : A group of patients with various affections of the nervous system was treated with vitamin $B_{12}$ in relatively large doses (90-120 gamma in 24 hours in the course of about 15 days, average total dose 1410 gamma) or in massive doses (1000 gamma in 24 hours in the course of about 14 days, the average total dose 14,000 gamma). $B_{12}$ turned out to be most effective in polyneuritis of various

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

V

USSR/Pharmacology - Toxicology - Chelating Agents.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18644

Author : Royzen, Sh.S.

Inst : Gorkiy Medical Institute

Title : An Experiment of Treatment of Polyneuritis with Vitamin $B_{12}$

Orig Pub : Tr. Kliniki nervn. bolezney. Gor'kovsk. med. in-t, 1958, vyp. 1, 16-20

Abstract : The high effectiveness is noted of treatment of polyneuritises of various etiology (8 patients) with vitamin $B_{12}$ in doses of 90-120 gamma daily intramuscularly or in the form of intraveous introduction, beginning with 30 gamma, with a gradual increase to 300 gamma daily.

Card 1/1

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ANASTASIYEV, P.I.; BROSTREM, A.A.; VESHENEVSKIY, S.N.; GEL'MAN, G.A.; GORNSHTEYN, L.A.; ZIMENKOV, M.G.; KARVOVSKIY, G.A.; KIBLITSKIY, V.A.; KLEYN, P.N.; KLIMIKSEYEV, V.M.; KLYUYEV, S.A.; KNORRING, G.M.; KORENEVSKIY, A.N.; LEYBZON, Ya.I.; LIVSHITS, D.S.; LIGERMAN, I.I.; LOGINOV, O.I.; MILICH, M.B.; NAYFEL'D, M.R.; OKOROKOV, S.P.; POLYAK, A.B.; ROYZEN, S.S.; RYABOV, M.S.; SINITSYN, O.A.; SOLODUKHO, Ya.Yu.; SOSKIN, E.A.; STASYUK, V.N.; BOL'SHAM, Ya.M., red.; GRACHEV, V.A., red.; SAMOVER, M.L., red.; BORICHEV, I. Ye., red.; DANILENKO, A.I., red.; KHRAMUSHIN, A.M., red.; YAKUBOVSKIY, F.B., red.; BRENDENBURGSKAYA, E.Ya., red.; KOMAR, M.A., red.; BORUNOV, N.I., tekhn. red.

[Handbook on electrical systems of industrial enterprises in four volumes] Spravochnik po elektroustanovkam promyshlennykh predpriiatii v chetyrekh tomakh. Pod obshchei red. I.E. Borichevа i dr. Moskva, Gosenergoizdat. Vol.1. [Design of electrical systems of industrial enterprises in two parts] Proektirovanie elektroustanovok promyshlennykh predpriiatii v dvukh chastiakh. Pt.2. Pod red. IA.M.Bol'shama i dr. 1963. 598 p. (MIRA 17:3)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S.

3

621.314.214 : 621.313.236.3

85. SELECTION OF ANTI-HUNTING TRANSFORMERS FOR ELECTRIC DRIVES WITH AMPLIDYNES - S.S. Roizen. Elektrichestvo, 1957, No. 4, 67-68. - In Russian.

Tests have been made on combinations of typical amplidynes and anti-hunting transformers; the high amplification factors expected from theoretical calculations were not reached because hunting occurred at much lower values. This discrepancy did not occur with RC damping circuits, so that the error is not due to faults of the method but of the data used. The use of transformer data from experimentally determined frequency-response characteristics for the voltage range used in the amplidyne circuit under actual service conditions is recommended. F.Busemann

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S.S., kandidat tekhnicheskikh nauk.

Selection of antihunting transformers for electric drives having amplidynes. Elektrichestvo no.4:57-60 Ap '57. (MLRA 10:5)

1.MOPEO GPI Tyazhpromelektroproyekt.
(Electric transformers)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEL', S. S.

"Questions on the Theory and Design of an Electric Drive With a Direct Current Motor and Vacuum-Gas Tube." Cand Tech Sci, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov, Min Higher Education, Moscow, 1955. (KL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55-Survey of Scientific and Technical Dissertations Defended At USSR Higher Educational Institutions (15)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, S. S.

"Electronic Selsyn Viscosimeter." Sub 7 May 51, All-Union Correspondence Polytechnic Inst, Ministry of Higher Education USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

S/105/61/000/001/006/007
B012/B059

AUTHORS: [redacted], Candidate of Technical Sciences,
Shteyn, I. M., Engineer

TITLE: Automation of the Electric Drive of a Continuous Reducing Pipe Rolling Mill

PERIODICAL: Elektrichestvo, 1961, No. 1, pp. 82-85

TEXT: The present article is the description of the automation of a 140-type continuous reducing rolling mill with 20 rolling sets. A device for precise speed measurement was installed in the rolling mill since the theory of rolling in continuous pipe rolling mills is not yet sufficiently elaborated and safe set-speed tolerance and admissible speed drop are not known. In working out the system of automatic speed control, a speed deviation of 0.5% maximum and an error of the speed measuring device of 0.2% maximum were assumed. Fig. 1 represents an AC-tachogenerator developed especially for the rolling mill under consideration. The transformer operates according to the principle of the Maxwell-connection shown in Fig. 2a. The contactless transformer (Ref. 1, author's certificate

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Automation of the Electric Drive of a Continuous Reducing Pipe Rolling Mill

S/105/61/000/001/006/007
B012/B059

No. 113220 of the class 21a$^4$ 71) shown in Fig 2b was used in the electric drive of the rolling mill. The layout of the electrical drive is shown in Fig. 3. The chief advantage of this system with a frequency-tachogenerator is the fact that the current in the feedback coil of the magnetic amplifier is the initial quantity of the transformer device and that this current is proportional to not only the frequency but also the feeder voltage. Magnetic amplifiers are reversible. Maximum power of the output stage is about 600 watts. Two preceding stages increased the rapid action of the magnetic amplifier and made drive stabilization easier. Fig. 4 shows a diagram of the device for precise speed measurement. The measuring method with inter-frequency-standards allowed a considerable reduction of the error. The authors point out that a final word on the expedient use of this kind of drive for continuous pipe rolling mills can be spoken only after the end of the investigations in the mill. There are 4 figures and 2 Soviet references.

ASSOCIATION: GPI Tyazhoromelektroproyekt

SUBMITTED: April 11, 1960

Card 2/5

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

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B012/B059

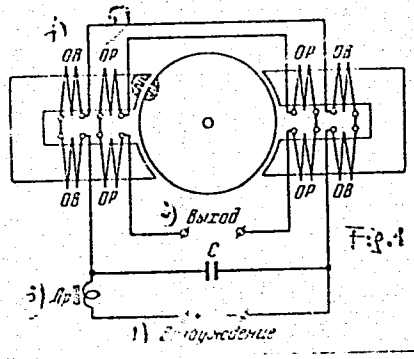


Fig. 1

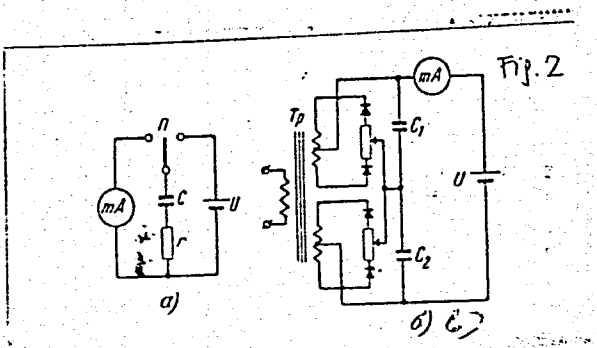


Fig. 2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

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B012/B059

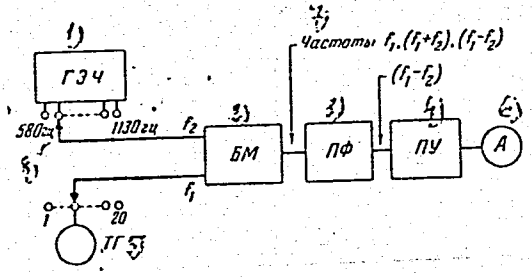


Fig.4.

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Legend to Fig. 1: Diagram of the tachogenerator. 1) Excitation, 2) output, 3) choke, 4) field winding, 5) operational winding.
Legend to Fig. 2: Transformer device. a - Maxwell-connection, b - connection used in the 140-type rolling mill.
Legend to Fig. 3: Diagram of the drive: 1)Feedback winding, 2) control winding, 3) cycles per second, 4) magnetic amplifier, 5) field winding, 6) motor, 7) tachogenerator, 8) transformer device, 9) control rheostat, 10) shunt control, 11) $U_{excitation}$.
Legend to Fig. 4: Diagram of the device for precise velocity measurement. 1) Standard frequency generators, 2) balanced modulator, 3) band filter, 4) transformer device, 5) tachogenerators, 6) measuring instrument, 7) frequencies, 8) cps.



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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROZEN, S.S., kand.tekhn.nauk

Calculation of static errors in the speed governor of a d.c. motor. Elektrichestvo no.8:56-62 Ag '61. (MIRA 14:10)

1. Gosudarstvennyy proyektnyy institut "Tyazhpromelektroproyekt".
(Electric motors, Direct current)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

POYEMNYY, F.A.; ROYZEN, Sh.S.

Vitamin $B_{12}$ therapy for diseases of the peripheral nervous system [with summary in French]. Zhur.nevr. i psikh. 57 no.2:191-192 '57. (MLRA 10:6)

1. Kafedra nervnykh bolezney (zav. - prof. F.A.Poyemnyy) Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.

(NERVES, PERIPHERAL, dis.
ther., vitamin B12)
(VITAMIN B12, ther. use
peripheral NS dis.)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, Sh.S., kand.med.nauk

Observations on pontile otogenous abscess. Vest.oto-rin. 20 no.5:113-115 S-O '58 (MIRA 11:12)

1. Iz kafedry nervnykh bolezney (zav. - prof. F.A. Poyemnyy) Gor'kovskogo meditsinskogo instituta.

(PONS, abscess, otogenic (Rus))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, Sh.S., POYEMNYY, F.A.

Treatment of neurological diseases with relatively large and massive doses of vitamin B 12. [with summary in French]. Zhur.nerv. i psikh. 58 no.2:212-213 '58. (MIRA 11:5)

1. Kafedra nervnykh bolezney (zav. - prof. F.A. Poyemnyy) Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(NERVOUS SYSTEM, dis.
ther., vitamin B12, massive doses (Rus))
(VITAMIN B12, ther.use,
NS dis., massive doses (Rus))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZEN, V.V., inzh.; SHESTOPALOV, V.N., inzh.; SHCHELKUNOVA, A.M.

Standard water drainage equipment in Krivoy Rog Basin mines.
Shakht. stroi. 9 no.3:17-19 Mr '65. (MIRA 18:7)

1. Trest po proyektirovaniyu zhelezorudnykh predpriyatiy Krivorozhskogo basseyna "Krivbassproyekt."

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

L 39485-65 EWT(l)/EWA(h) Peb GG

ACCESSION NR: AP5004937 S/0286/65/000/002/0035/0035

AUTHORS: Royzen, V. Z.; Kleyn, E. A.; Rozental', N. K.

TITLE: Polarized relay. Class 21, No. 167577

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 2, 1965, 35

TOPIC TAGS: relay

ABSTRACT: This Author Certificate presents a polarized relay. To increase the temperature stability and vibration resistance of its parameters, the polarizing and exciting magnetic fluxes are separated. Permanent magnets are used as supporting parts of the structure for supporting the armature and operating poles. To decrease the response time, the structure subassemblies are insulated electrically from each other, e.g., by phosphating. To better utilize the exciting magnetic flux, its magnetic circuit is separated from the supporting structure of the relay by nonmagnetic split collars which are also used for fastening the controlled poles.

ASSOCIATION: none

SUBMITTED: 30Oct54 ENCL: 00 SUB CODE: EC

NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

TARTAKOVSKIY, B.N., kand. tekhn. nauk; ESKIN, V.S.; SOLODOVNIK, L.M.; ROYZEN, Ya.Sh.

Efficient procedure for overburden removal using a combined system of working. Met. i gornorud. prom. no.3:53-56 My-Je '64. (MIRA 17:10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

NOVOZHILOV, M.G., doktor tekhn. nauk; TARTAKOVSKIY, B.N., kand. tekhn. nauk; ESKIN, V.S.; SEREDA, G.L.; ROYZEN, Ya.Sh.

Main trends in the technology of strip mining in the mines of the Pokrovskiy Mining and Ore Dressing Combine. Met. i gornorud. prom. no.4:60-64 Jl-Ag '65. (MIRA 18:10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

NOVOZHILOV, M.G., prof.; TARTAKOVSKIY. B.N., kand.tekhn.nauk; ESKIN, V.S., inzh.; SOLODOVNIK, L.M., inzh.; ROYZEN, Ya.Sh., inzh.

Substantiating the efficient limits for strip mining horizontal deposits with the use of continuous-operation equipment. Izv.vys. ucheb.zav.;gor.zhur. 7 no.7:3-7 '64. (MIRA 17:10)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema. Rekomendovana kafedroy otkrytykh gornykh rabot.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BOYNIBLAT, Ye.M.; BRAYNINA, Kh.Z.

Concentration of substances in polarographic analysis. Report No.3: Determination of anions. Zhur. anal. khim. 19 no.6:681-692 '64. (MIRA 18:3)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

POLYKOVSKIY, V.S.; ROYZENMAN, F.M.; MAKSAREVA, T.S.; POKEYEV, V.M.

Methodology of determining pressure by inclusions in quartz. (MIRA 16:10)
Trudy MGRI 39:92-100 '63.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZENTULER, Ts. Ya.

AUTHOR: Royzentuler, Ts.Ya. (Moscow) 47-58-3-23/27

TITLE: Questions on Electricity for the 10th Class (Voprosy po elektrichestvu dlya 10-go klassa)

PERIODICAL: Fizika v Shkole, 1958, Nr 3, pp 84-85 (USSR)

ABSTRACT: The author presents 11 questions on electricity and the corresponding answers to be applied in lessons.

ASSOCIATION: 46-ya srednyaya shkola (The 46th Secondary School)

AVAILABLE: Library of Congress

Card 1/1 1. Physics-Study and teaching 2. Electricity-Study and teaching

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

30897. ROYZIN, M.

Mikroflora kamer khraneniya kholodil'nikov. Kholodil. tekhnika, 1949, No. 3, s. 67-73.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZENBLAT, Ye.M.; BRAYNINA, Kh.Z.

Determination of zinc, lead, and copper in barium, strontium, and calcium carbonates. Metod. anal. khim. reak. i prepar. no. 5/6:105-110 '63. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv, Donetskiy filial.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

[illegible], Ye.L.: [illegible], L.A.: [illegible], Ye.I.

Determination of the microquantities of sulfide ions. Metod. anal. khim. reak. i prepar. no.5/6:110-116 '63.

(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BRAYNINA, Kh.Z.; ROYZENBLAT, Ye.M.

Quasi-equilibrium states in the systems Metal - Metal-Anion solid - Cation-Anion solution-solution. Elektrokhimiia 1 no.4: 403-408 Ap '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv, Donetskiy filial.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BRAYNINA, Kh.Z.; ROYZENBLAT, Ye.M.

Concentration of substances in polarographic analysis. Report 5: The sensitivity of anion determination. Zhur. anal. khim. 19 no.12:1442-1448 '64 (MIRA 18:1)

1. All-Union Scientific-Research Institute of Chemical Reagents and Specially Pure Chemicals, Branch in Donetsk.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BRAYNINA, Kh. Z.; ROYZENBLAT, Ye. M.

Determination of microquantities of chlorine ions on a stationary mercury electrode. Zav.lab. 28 no.1:21-23 '62. (MIRA 15:2)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv.
(Chlorine--Analysis) (Electrodes, Mercury)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BRAYNINA, Kh.Z.; ROYZENBLAT, Ye.M.; BELYAVSKAYA, V.B.

Determination of microamounts of substances by their accumulation as insoluble films on electrodes and subsequent electrochemical dissolution. Zav. lab. 28 no.9:1047-1052 '62. (MIRA 16:6)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov.
(Electrochemical analysis)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

BRAYNINA, Kh.Z.; ROYZENBLAT, Ye.M.

Concentration of substances in polarographic analysis. Report No.2: Separation of iron. Zhur. anal. khim. 18 no.11:1362-1366 N '63. (MIRA 17:1)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZENBLAT, Ye.M.; BRAYNINA, Kh.Z.

Determination of microquantities of zinc by amalgam polarography.
Zav.lab. 27 no.10:1197-1199 '61. (MIRA 14:10)

1. Stalinskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov.
(Zinc--Analysis)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

Polyakov, V. I., Shcherba, I. ...

Thermodynamic conditions of the formation of quartz crystals in the pegmatites of Maydantal. Uzb. geol. zhur. 9 no.3:66-71 '65.
(MIRA 18:8)

1. Strelnezniatskiy nauchno-issledovatel'skiy institut geologii i mineral'nogo syr'ya, Tashkent.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ROYZENMAN, F.M.

Fluid inclusions with carbon dioxide and their genetic classification. Izv.vys.ucheb.zav.; geol. i razv. 8 no.2:68-76 F '65. (MIRA 18:3)

1. Yakutskoye geologicheskoye upravleniye.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001445520015-4

ACC NR: AP6033316 SOURCE CODE: UR/0425/66/009/005/0007/0010

AUTHOR: Royzenvaser, L. S.

ORG: Dushanbinskiy State Pedagogical Institute im. T. G. Shevchenko (Dushanbinskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Quasienergy integrals of the equations of motion of a point with variable mass

SOURCE: AN TadzhSSR. Doklady, v. 9, no. 5, 1966, 7-10

TOPIC TAGS: motion equation, Lagrange equation, variable mass system

ABSTRACT: In the Lagrange equations for a mechanical system

$$\frac{d}{dt}\frac{dL}{\partial \dot{q}_\alpha}-\frac{\partial L}{\partial q_\alpha}=0, \quad (1)$$

$$\alpha=1, 2,.. S$$

the rate of energy change is given by

$$\frac{dE}{dt}=-\frac{\partial L}{dt}. \quad (2)$$

If $\partial L/\partial t = 0$ (the Lagrange function does not explicitly depend on time), the energy

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integral follows from Eq. (2). The author investigates the possibility of obtaining from Eq. (2) the algebraic first integrals in the practically unexplored case when the Lagrange function does depend on time explicitly. The author calls these integrals "quasienergy integrals". The existence of such integrals for a special class of problem is investigated, namely, the motion of a material point with a mass which is a function of time in a gravitational field of a specified potential energy. The author is grateful to Prof. A. A. Kosmodem'yanskiy for suggesting this work and for his interest. The paper was presented by O. V. Dobrovol'skiy, corresponding member An TadzSSR. Orig. art. has: 18 equations.

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1. Polyarno-al'piyskiy botanicheskiy sad Kol'skogo filiala imeni S.M.Kirova AN SSSR.

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